

## **REMARKS**

### **I. Introduction**

With the cancellation without prejudice of claims 16 to 18 and 23, claims 14, 15, 19 to 22 and 24 to 27 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that the present application is in condition for immediate allowance, and reconsideration is respectfully requested.

### **II. Objection to Drawings**

The Drawings were objected to under 37 C.F.R. § 1.83(a) as allegedly failing to show all features of the invention specified in the claims. It is respectfully submitted that this objection should be withdrawn for at least the following reasons.

Regarding the features of claims 16 and 23 allegedly missing from the drawings, although Applicants may not agree with the merits of this part of the objection, to facilitate matters, claims 16 and 23 have been canceled without prejudice, and claim 24 has been amended to change its dependency from claim 23 to claim 14.

Regarding the feature of claim 24 that diameters of the bore holes per level increase in a downstream direction, the Examiner will note that a new Figure 3 has been added herein. The new Figure 3 illustrates a schematic cross-sectional view of an embodiment of the atomization system, in which diameters of bore holes (8) in second section (10) of the atomization tube (4) increase in a downstream direction. In addition, the Specification has been amended to conform with the addition of Figure 3. **Support for Figure 3 may be clearly found in claim 10 of the application as originally filed, as well as on page 3, lines 1 to 3, page 4, lines 28 to 29 and page 4, lines 34 to 35 of the Specification. No new matter has been added to the Drawings or the Specification. Therefore, approval and entry of the new Figure 3 is respectfully requested.**

Accordingly, it is respectfully submitted that the Drawings show all of the features of the invention specified in the claims.

In view of all of the foregoing, withdrawal of this objection is respectfully requested.

### **III. Specification**

Regarding the objection to the amendment of January 22, 2009 under 35 U.S.C. § 132(a) as allegedly introducing new matter into the disclosure, although Applicants may not agree with the merits of the objection, to facilitate matters, the Specification has been amended as suggested. Accordingly, withdrawal of this objection is respectfully requested.

### **IV. Rejection of Claims 14 to 27 Under 35 U.S.C. § 112, 1st Paragraph**

Claims 14 to 27 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. It is respectfully submitted that these claims sufficiently comply with the written description requirement for at least the following reasons.

As an initial matter, claims 16 to 18 and 23 have been canceled without prejudice, thereby rendering moot the rejection with respect to these claims.

Regarding claim 14 and its dependent claims 15, 19 to 22 and 24 to 27, the Examiner will note that claim 14 has been amended to eliminate the feature that the atomization tube is formed in one piece having only one axis of symmetry, thereby rendering moot the rejection with respect to these claims.

Accordingly, it is respectfully submitted that claims 14, 15, 19 to 22 and 24 to 27 sufficiently comply with the written description requirement for at least the above reasons.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

### **V. Rejection of Claims 14 to 27 Under 35 U.S.C. § 112, 2nd Paragraph**

Claims 14 to 27 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite. It is respectfully submitted that these claims are sufficiently definite for at least the following reasons.

As an initial matter, claims 16 to 18 and 23 have been canceled without prejudice, thereby rendering moot the rejection with respect to these claims.

Regarding claim 14 and its dependent claims 15, 19 to 22 and 24 to 27, the Examiner will note that claim 14 has been amended to eliminate the feature that the atomization tube has only one axis of symmetry, thereby rendering moot the rejection with respect to these claims.

Accordingly, it is respectfully submitted that claims 14, 15, 19 to 22 and 24 to 27 are sufficiently definite for at least the above reasons.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

**VI. Rejection of Claims 14 to 23 Under 35 U.S.C. § 102(b)**

Claims 14 to 23 were rejected under 35 U.S.C. § 102(b) as anticipated by European Patent Application Publication No. 0 085 445 ("Son et al."). It is respectfully submitted that Son et al. does not anticipate these claims for at least the following reasons.

As an initial matter, claims 16 and 23 have been canceled without prejudice, thereby rendering moot the rejection with respect to these claims.

Regarding claim 14, this claim, as amended in response to the above rejections under 35 U.S.C. § 112, first and second paragraphs, relates to an atomization system for a fuel, including: a fuel injector; an atomization tube including at least a first section and a second section, the first section having at least one of an outer diameter and a wall thickness that is different than that of the second section; an air inlet; and at least one metering aperture.

Although Applicants may not agree with the merits of the rejection, to facilitate matters, claim 14 has been amended to incorporate the features of claim 17 and some of the features of claim 18, claims 17 and 18 have been canceled without prejudice and claim 26 has been amended to change its dependency from claim 18 to claim 14. Claim 14 as amended recites, in relevant parts, that **the second section is formed at a downstream side of the first section, and that the second section includes a plurality of bore holes at each of a plurality of positions on an outer wall of the atomization tube, along a length of the atomization tube.**

Son et al. describes an internal mix atomizer assembly including a member (1), an opening (4) for gas, an opening (5) for liquid, a mixing chamber (2) for mixing the liquid and the gas, and passages (3) through which the liquid/gas mixture is forced out of the chamber (2) at exit ports (6). However, Son et al. does not disclose, or even suggest, that a section of an atomization tube includes a plurality of bore holes at each of a plurality of positions on an outer wall of the atomization tube, along a length of the atomization tube. As is apparent from

Figures 1 and 2 of Son et al., member (1), which the Office Action apparently considers to constitute an atomization tube, includes a plurality of exit ports (6) at one position of its outer wall opposite to flange connection (8), but does not include a plurality of bore holes at each of a plurality of positions on its outer wall along the length of the member (1). Accordingly, it is respectfully submitted that Son et al. does not anticipate claim 14 for at least these reasons.

As mentioned above, claims 17 and 18 have been canceled without prejudice, thereby rendering moot the rejection with respect to these claims.

As for claims 15 and 19 to 22, which ultimately depend from claim 14 and therefore include all of the features of claim 14, it is respectfully submitted that Son et al. does not anticipate these dependent claims for at least the reasons set forth above.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

#### **VII. Rejection of Claims 25 to 27 Under 35 U.S.C. § 103(a)**

Claims 25 to 27 were rejected under 35 U.S.C. § 103(a) as unpatentable over Son et al. It is respectfully submitted that Son et al. does not render these claims unpatentable for at least the following reasons.

Claims 25 to 27 ultimately depend from claim 14. As set forth in detail in Section VI of this response, Son et al. does not disclose, or even suggest, all of the features of claim 14. Accordingly, it is respectfully submitted that Son et al. does not render unpatentable claims 25 to 27, which depend from claim 14.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

### **VIII. Conclusion**

It is therefore respectfully submitted that the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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